UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,419	05/24/2001	William D. Norcott	50277-1005	9399

7590   04/04/2005

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EXAMINER
ALI, MOHAMMAD

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-10* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to the Appeal Brief filed on 09/17/04.

Claim Objections

2.   Claim 6 objected to because of the following informalities: Examiner suggests

claim 6 should be written as an independent form. Appropriate correction is required.

Response to Arguments

3.   Applicant's arguments with respect to claims 1, and 3-10 have been considered

but are moot in view of the new ground(s) of rejection.

Double Patenting

4.   The nonstatutory double patenting rejection is based on a judicially created
        doctrine grounded in public policy (a policy reflected in the statute) so as to
        prevent the unjustified or improper timewise extension of the "right to exclude"
        granted by a patent and to prevent possible harassment by multiple assignees.
        See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re
        Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686
        F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164
        USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644
        (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
        used to overcome an actual or provisional rejection based on a nonstatutory
        double patenting ground provided the conflicting application or patent is shown to
        be commonly owned with this application. See 37 CFR 1.130(b).
        Effective January 1, 1994, a registered attorney or agent of record may sign a
        terminal disclaimer. A terminal disclaimer signed by the assignee must fully
        comply with 37 CFR 3.73(b).

        Claims 1, 3-6 provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-6 of

copending Application No. 10/435,703. Although the conflicting claims are not

identical, the are not patentable distinct from each other because they are

substantially similar in scope and they use the same limitations.

Claims 1-6 of the 10/435,703 reference recites all the elements of claims 1, 3-6

of the instant application 09/863,419. Claims 1-6 of the 10/435,703 reference also

includes additional element that are not recited in the instant claims.

It would have been obvious to a person of ordinary skill in the art at the time of

the invention was made to omit the additional elements of claims 1-6 to arrive at the

claims 1, 3-6 of the instant application because the person would have realized that the

remaining element would perform the same functions as before. "Omissions of element

and its function in combination is obvious expedient if the remaining elements perform

same functions as before." See In re Karlson (CCPA) 136 USPQ 184, decide Jan 16,

1963, App. No. 6857, U. S. Court of Customs and Patent Appeals.

The following table shows the claims in 09/863,419 that are rejected by

corresponding claims in 10/435,703

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Claims Comparison Table

	09/863,419	10/435,703
Claims	1	1
	2	1
	3	3
	4	4
	5	5

6   6

This is a <u>provisional</u> obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1, 2-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

William D. Norcott ('Norcott' hereinafter), USP, 5,848,405 in view of Rauer et al. ('Rauer'

hereinafter), USP, 6,161,103.

With respect to claim 1,

Norcott teaches a method for change data capture (see col. 1, lines 64 to col. 2,

line 1), comprising the steps of:

executing a database statement (see col. 6, lines 54-55) to extract from a

recovery log (new data for refresh processing purposes, the server process deletes

[extract] the ROWID range from the ROWID range table. Updates a redo log to indicate

the changes made to the range table ensures that identification of the new data can be

recovered in the event of database crash, see col. 6, lines 29-31 and col. 5, lines 59-61,

Norcott), change data indicating at least one modification that has been performed to a

source object (updates a redo log to indicate the changes made to the range table, see

col. 5, lines 59-60, Norcott); and

storing the change data from the recovery log in a database object, other than

the source object (the start and end ROWID values are database objects and stored in

step 406, see col. 5, lines 57-67, Fig. 4, Norcott), wherein the database object includes

a change table (the server process updates a redo log to indicate the changes made to

the range table, see col. 5, lines 54-55, Norcott).

Norcott does not explicitly indicate the claimed "statement to extract".

Rauer discloses claimed staging system (the connector is a grouping mechanism

for extraction statements and a specification for input and output data stores, see col.

19, lines 22-24, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the

time of the present invention, to combine the teachings of the cited references because

the statement to extract of Rauer's teachings would have allowed to Norcott's system to

create databases, loading and accessing data in the databases as suggested by Ruer,

see col. 1, lines 46-47. Further, statement to extract as taught by Rauer improves to

perform set of commands to execute the creation of the aggregate tables (see col. 3,

lines 19-20, Rauer).

As to claim 3,

Norcott teaches renaming a source column into a change column (the server

process updates a redo log to indicate the changes made to the range table. Since table

has been changed columns and rows automatically changed, see col. 5, lines 54-55

and col. 7, lines 3-6, Norcott).

Norcott does not explicitly indicate claimed change column.

Rauer discloses claimed change column (slowly changing dimension semantic

type and semantic type are an insert dimension and an index dimension adaptive

template. Each adaptive template has a corresponding set of pseudo-SQL statements.

During the semantic template conversion this pseudo-SQL will be transformed into real

SQL source code. This is done by converting the pseudo-SQL tokens into

actualdimension column names, etc. The column names and table names are derived

from the schema definitions, see col. 24, lines 4-12, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the

time of the present invention, to combine the teachings of the cited references because

the changecolumn of Rauer's teachings would have allowed to Norcott's system to

create databases, loading and accessing data in the databases as suggested by Ruer,

see col. 1, lines 46-47. Further, change column as taught by Rauer improves to perform

set of commands to execute the creation of the aggregate tables (see col. 3, lines 19-

20, Rauer).

As to claim 4,

Norcott teaches generating the database statement to extract the change data

from the recovery log and further to store the change data in the database object (If the

new data records are stored entirely within a single group of data records having a

contiguous sequence of ROWIDs, then the summary refresh process is completed after

the server process deletes [extract] the ROWID range from the ROWID range table, see

col. 6, lines 27-32 and lines 50-58, Norcott).

As to claim 6,

Norcott teaches a computer-readable medium bearing instructions for change

data capture, said instructions arranged, when executed, to cause one or more

processors to perform the steps of a method (queries are processed by computer

system 100 in response to processor 102 executing sequences of instructions

contained in memory 104 and the instructions can read into memory 104 from another

computer-readable medium, such as data storage device. Execution of the sequences

of instructions contained in memory 104 causes processor 102 to perform the process,

see col. 3, lines 20-28, Norcott).

As to claim 5,

Norcott teaches shipping the recovery log from an on-line transaction processing

(OLTP) system (The source of the data is an online transaction processing (OLTP)

database and OLTP databases provide a mechanism for exporting [shipping] data from

the database into a static file, see col. 4, lines 20-25, Norcott).

Norcott does not explicitly indicate the claimed "staging system".

Rauer discloses claimed staging system (SQL statements are issued to the

source system and the results are loaded into the staging tables. The staging tables had

been created as a result of block. Once the staging tables have been loaded, the data

can then be moved into the datamart, see col. 10, lines 49-53, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the time of the present invention, to combine the teachings of the cited references because the staging system of Rauer's teachings would have allowed to Norcott's system to create databases, loading and accessing data in the databases as suggested by Ruer, see col. 1, lines 46-47. Further, staging system as taught by Rauer improves to perform set of commands to execute the creation of the aggregate tables (see col. 3, lines 19-20, Rauer).

With respect to claim 7,

Norcott teaches a method of change data capture (see col. 1, lines 64 to col. 2, line 1), comprising the steps of:

shipping a recovery log (Updates a redo log to indicate the changes made to the range table ensures that identification of the new data can be recovered in the event of database crash, see col. 5, lines 59-61, Norcott) from an on-line transaction processing (OLTP) system (The source of the data is an online transaction processing (OLTP) database and OLTP databases provide a mechanism for exporting [shipping] data from the database into a static file, see col. 4, lines 20-25, Norcott); and

Norcott teaches performing the steps (see col. 5, lines 59-61) of:

extracting change data from a recovery log (new data for refresh processing purposes, the server process deletes [extract] the ROWID range from the ROWID range table. Updates a redo log to indicate the changes made to the range table ensures that identification of the new data can be recovered in the event of database crash, see col. 6, lines 29-31 and col. 5, lines 59-61, Norcott); and

storing the change data from the recovery log in a database object (the start and

end ROWID values are database objects and stored in step 406, see col. 5, lines 58-66,

Fig. 4, Norcott), said change data indicating at least one modification that has been

performed to a source object (updates a redo log to indicate the changes made to the

range table, see col. 5, lines 59-60, Norcott).

Norcott does not explicitly indicate the claimed "staging system".

Rauer discloses claimed staging system (SQL statements are issued to the

source system and the results are loaded into the staging tables. The staging tables had

been created as a result of block. Once the staging tables have been loaded, the data

can then be moved into the datamart, see col. 10, lines 49-53, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the

time of the present invention, to combine the teachings of the cited references because

the staging system of Rauer's teachings would have allowed to Norcott's system to

create databases, loading and accessing data in the databases as suggested by Ruer,

see col. 1, lines 46-47. Further, staging system as taught by Rauer improves to perform

set of commands to execute the creation of the aggregate tables (see col. 3, lines 19-

20, Rauer).

Norcott does not explicitly indicate the claimed "statement to extract".

Rauer discloses claimed staging system (the connector is a grouping mechanism

for extraction statements and a specification for input and output data stores, see col.

19, lines 22-24, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the

time of the present invention, to combine the teachings of the cited references because

the statement to extract of Rauer's teachings would have allowed to Norcott's system to

create databases, loading and accessing data in the databases as suggested by Ruer,

see col. 1, lines 46-47. Further, statement to extract as taught by Rauer improves to

perform set of commands to execute the creation of the aggregate tables (see col. 3,

lines 19-20, Rauer).

With respect to claim 8,

Norcott teaches a method of change data capture (see col. 1, lines 64 to col. 2,

line 1), comprising the steps of:

shipping a recovery log (Updates a redo log to indicate the changes made to the

range table ensures that identification of the new data can be recovered in the event of

database crash, see col. 5, lines 59-61, Norcott) from an on-line transaction processing

(OLTP) system (The source of the data is an online transaction processing (OLTP)

database and OLTP databases provide a mechanism for exporting [shipping] data from

the database into a static file, see col. 4, lines 20-25); and

Norcott teaches performing (see col. 1, lines 6-8) the steps of:

registering the recovery log with a log viewer (Updates a redo log to indicate the

changes made to the range table ensures that identification of the new data can be

recovered in the event of database crash, see col. 5, lines 59-61, Norcott);

generating a SQL statement to extract the change data from the recovery log

(After all the new records have been added to the "sales" table it is possible to identify

the new records by using the ROWID range table, for example by processing the SQL

select statement:

SELECT*FROM sales

WHERE (ROWID>=X) AND (ROWID<=Y)

The summary refresh process can access the new data by processing such a

select statement after obtaining the values of x and y from the ROWID range table, see

col. 6, lines 50-58, Norcott); and

executing the SQL statement (see col. 6, lines 50-55, Norcott), thereby extracting

the change data from the recovery log via the log viewer (new data for refresh

processing purposes, the server process deletes [extract] the ROWID range from the

ROWID range table. Updates a redo log to indicate the changes made to the range

table ensures that identification of the new data can be recovered in the event of

database crash, see col. 6, lines 29-31 and col. 5, lines 59-61, Norcott) and storing the

change data from the recovery log in a change table (the start and end ROWID values

are database objects and stored in step 406, see col. 5, lines 58-66, Fig. 4, Norcott),

said change data indicating at least one modification that has been performed to a

source object (updates a redo log to indicate the changes made to the range table, see

col. 5, lines 59-60, Norcott).

Norcott does not explicitly indicate the claimed "staging system".

Rauer discloses claimed staging system (SQL statements are issued to the

source system and the results are loaded into the staging tables. The staging tables had

been created as a result of block. Once the staging tables have been loaded, the data can then be moved into the datamart, see col. 10, lines 49-53, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the time of the present invention, to combine the teachings of the cited references because the staging system of Rauer's teachings would have allowed to Norcott's system to create databases, loading and accessing data in the databases as suggested by Ruer, see col. 1, lines 46-47. Further, staging system as taught by Rauer improves to perform set of commands to execute the creation of the aggregate tables (see col. 3, lines 19-20, Rauer).

Norcott does not explicitly indicate the claimed "statement to extract".

Rauer discloses claimed staging system (the connector is a grouping mechanism for extraction statements and a specification for input and output data stores, see col. 19, lines 22-24, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the time of the present invention, to combine the teachings of the cited references because the statement to extract of Rauer's teachings would have allowed to Norcott's system to create databases, loading and accessing data in the databases as suggested by Ruer, see col. 1, lines 46-47. Further, statement to extract as taught by Rauer improves to perform set of commands to execute the creation of the aggregate tables (see col. 3, lines 19-20, Rauer).

As to claim 9,

Norcott teaches renaming a source column into a change column (the server

process updates a redo log to indicate the changes made to the range table. Since table

has been changed columns and rows automatically changed, see col. 5, lines 54-55

and col. 7, lines 3-6, Norcott).

Norcott does not explicitly indicate claimed change column.

Rauer discloses claimed change column (slowly changing dimension semantic

type and semantic type are an insert dimension and an index dimension adaptive

template. Each adaptive template has a corresponding set of pseudo-SQL statements.

During the semantic template conversion this pseudo-SQL will be transformed into real

SQL source code. This is done by converting the pseudo-SQL tokens into

actualdimension column names, etc. The column names and table names are derived

from the schema definitions, see col. 24, lines 4-12, Rauer).

It would have been obvious to one ordinary skill in the data processing art, at the

time of the present invention, to combine the teachings of the cited references because

the changecolumn of Rauer's teachings would have allowed to Norcott's system to

create databases, loading and accessing data in the databases as suggested by Ruer,

see col. 1, lines 46-47. Further, change column as taught by Rauer improves to perform

set of commands to execute the creation of the aggregate tables (see col. 3, lines 19-

20, Rauer).

As to claim 10,

Norcott teaches wherein the on-line transaction processing (OLTP) system are

provided by different database vendors employing a different, incompatible internal

implementation (The source of the data is an online transaction processing (OLTP)

database and OLTP databases provide a mechanism for exporting [shipping] data from

the database into a static file. The static file then loaded by the server process into the

database table and enable the database to processes for update, see col. 4, lines 20-

30, Norcott).

Remarks

7.   Combination of references teaches change table, column,....
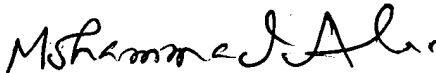
Conclusion

8.   Kiser et al. (USP, 6,687,560) teaches change table, column,...

Contact Information

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mohammad Ali whose telephone number is (571) 272-

4105. The examiner can normally be reached on Monday-Thursday (7:30 am-6:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Mohammad Ali
Primary Examiner
Art Unit 2167

MA
March 24, 2005